

WHAT IS CLAIMED IS:

1. A gas treatment apparatus comprising:

an outer tube having a gas inlet port connected to a gas supply system for receiving gas and a gas outlet port connected to an exhaust pipe, and defining an inner space;

a wafer boat provided in said inner space and holding plural wafers spaced from one another in a predetermined direction;

an inner tube provided between said wafer boat and said outer tube and elongated in said predetermined direction; and

a gas feeder provided between said inner tube and said wafer boat, connected to said gas inlet port and defining a gas passage gradually reduced in cross section in said predetermined direction, and formed with gas outlet holes equal in open area and spaced in said predetermined direction for blowing said gas to said wafers.

2. The gas treatment apparatus as set forth in claim 1, in which said gas feeder has a narrow end surface, a wide end surface, a convex outer surface extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to

said gas feeder at a position closer to said wide end surface than said narrow end surface.

3. The gas treatment apparatus as set forth in claim 2, in which said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

4. The gas treatment apparatus as set forth in claim 2, in which said outer convex surface and said inner concave surface are opposed to the inner surface of said outer tube and said wafer boat, respectively, and said gas outlet holes are formed in said inner concave surface.

5. The gas treatment apparatus as set forth in claim 3, in which said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said wafer boat.

6. The gas treatment apparatus as set forth in claim 2, in which said wide end surface has a generally crescent shape.

7. The gas treatment apparatus as set forth in claim 1, in which said gas passage and said gas outlet holes keeps the pressure of said gas inside of said gas feeder substantially constant.

8. The gas treatment apparatus as set forth in claim 1, in which said gas contains a doping gas component, and said doping gas component is supplied through said gas feeder to said wafers supported in said wafer boat.

9. The gas treatment apparatus as set forth in claim 8, said gas further contains a reactant gas component used for depositing a material on said wafers.

10. The gas treatment apparatus as set forth in claim 1, in which said outer tube serves as an outer shell of a reactor forming a part of a chemical vapor deposition system.

11. The gas treatment apparatus as set forth in claim 10, in which said chemical vapor deposition system is used for a low- pressure chemical vapor deposition.

12. The gas treatment apparatus as set forth in claim 11, in which said gas contains a doping gas component, a reactant gas used for depositing a material and a dilution gas.

13. A gas treatment apparatus comprising

an air-tight vessel having a gas inlet port connected to a gas supply system, a gas outlet port connected to an exhaust system and an inner space defined therein,

a retainer provided in said inner space and retaining plural wafers arranged at intervals, and

a gas feeder connected at one end portion thereof to said gas inlet port and having a gas passage reduced in cross section from said one end portion toward another end portion of said gas feeder and plural gas outlet holes connected to said gas passage for blowing said gas toward said plural wafers.

14. The gas treatment apparatus as set forth in claim 13, in which said gas passage keeps the gas pressure at said gas outlet holes constant.

15. The gas treatment apparatus as set forth in claim 13, in which said gas feeder has a narrow end surface, a wide end surface, a convex outer surface

extending between said narrow end surface and said wide end surface, a concave inner surface extending between said narrow end surface and said wide end surface and spaced from said convex outer surface and semi-cylindrical side surfaces connected between one of the side lines of said convex outer surface and one of the side lines of said concave inner surface and between the other of said side lines of said convex outer surface and the other of said side lines of said concave inner surface, and said gas inlet port is connected to said gas feeder at a position closer to said wide end surface than said narrow end surface.

16. The gas treatment apparatus as set forth in claim 15, in which said gas outlet holes are formed in said inner concave surface on a virtual line extending from said wide end surface toward said narrow end surface.

17. The gas treatment apparatus as set forth in claim 15, in which said outer convex surface and said inner concave surface are opposed to an inner surface of said air-tight vessel and said retainer, respectively, and said gas outlet holes are formed in said inner concave surface.

18. The gas treatment apparatus as set forth in claim 16, in which said virtual line is a generating line of said concave inner surface, and is substantially in parallel to a centerline of said retainer.

19. The gas treatment apparatus as set forth in claim 15, in which said wide end surface has a generally crescent shape.